



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/074,702	02/13/2002	Gary S. Rea	2478.2016-001	7061

21005 7590 05/01/2003

HAMILTON, BROOK, SMITH & REYNOLDS, P.C.  
530 VIRGINIA ROAD  
P.O. BOX 9133  
CONCORD, MA 01742-9133

EXAMINER

BOYKIN, TERRESSA M

ART UNIT	PAPER NUMBER
----------	--------------

1711

DATE MAILED: 05/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/074,702

Applicant(s)

REA, GARY S.

Examiner

Terressa M. Boykin

Art Unit

1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 6-25-02; 8-27-02.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1,24-26 and 32 is/are rejected.
- 7) ☒ Claim(s) 2-23,27-31 and 33-36 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4,5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

Art Unit: 1711

PCT National stage application

In accord with MPEP 609 II which states that "The examiner will consider the documents cited in the international search report in a PCT National stage application when the Form PCT/DO/EO/903 indicates that both the international search report and the copies of the documents are present in the national stage file." Since such is the case in this instance, the documents from the international search report, have been considered.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 24-26 are rejected under 35 U.S.C. 102(a, b, or e) as being anticipated by EP 0926162 see abstract, page 3 lines 30-37, page 7 (comparative example 3) .

Applicants' claims are directed to a method for drying a material such as a polymer hydrogel which passes through a cohesive phase as it dries. The method comprises agitating a composition while removing liquid until the solids content of the composition reaches a level at which the composition enters a cohesive phase, halting agitation, removing liquid from the composition in the absence of agitation, and resuming agitation. Applicants' specification notes that practice of the present invention can eliminate the problems associated with adhesion of a material to itself and to process equipment during the cohesive phase . Especially for crosslinked poly(allylamine).

Note however that EP 0926162 discloses a production process, in which hydrophilic crosslinked polymers can be dried uniformly with good efficiency, and the deterioration during the drying is little. The production process of a hydrophilic crosslinked polymer comprises the steps of polymerizing an aqueous solution including a hydrophilic monomer and a crosslinking agent to obtain a hydrogel crosslinked polymer, and drying the hydrogel crosslinked polymer, thus obtaining the hydrophilic crosslinked polymer, and is characterized in that: the hydrogel crosslinked polymer is dried in a static state until it becomes possible to disintegrate an aggregate of the hydrogel crosslinked polymer; the dried hydrogel crosslinked polymer is disintegrated into a particle size of 20 mm or less; and the disintegrated hydrogel crosslinked polymer is dried in a

Art Unit: 1711

stirred state and/or a fluidized state.

Note particularly on page 3 lines 30-37 that the reference discloses "the water content of the hydrogel crosslinked polymer, obtained by the polymerization and provided to the first-step drying, is usually in the range of 50.about.80 weight %, and such a hydrogel crosslinked polymer has strong tackiness and aggregates in the midway of drying, so the drying in a stirred state and/or a fluidized state is difficult and it is necessary to carry out the drying in a static state. The method for the drying in a static state is not especially limited if it can dry materials in a static state, and any conventional drying method of batch or continuous type or direct and/or indirect heating types can be used. Examples are as follows: parallel flow band or tunnel drying machine; through-flow band or tunnel drying machine; vacuum drying machine of static type; and drum drying machine. The through-flow band drying machine is especially preferable." Note also comparative example 3 on page 7.

In view of the above, since the reference discloses that water may be removed from a cohesive composition by halting the agitation and removing the liquid or water in the absence of agitation by the methods as disclosed in the reference in lines 34-37, there appears to be no significant difference between the reference(s) and that which is claimed by applicant(s). Any differences not specifically mentioned appear to be conventional. Consequently, the claimed invention cannot be deemed as novel and accordingly is unpatentable.

### **35 USC 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 32 is are rejected under 35 U.S.C. 103(a) as being unpatentable over by EP 0926162 see abstract, page 3 lines 30-37, page 7 (comparative example 3) in view of US 6380456.

The reference discloses the removal of liquid from a composition in the static state (no agitation) as claimed by applicants except for the removal of liquid from the composition comprising a crosslinked poly(allyl)amine.

Art Unit: 1711

**Note however that US 6380456 which teaches mixed bed ion-exchange hydrogel-forming polymer compositions and absorbent members comprising these compositions discloses therein that poly(allylamine) as a hydrogel; note claim 23 of US 6380456 which demonstrates this:**

Claim 23. The mixed-bed ion-exchange composition of claim 22 wherein the cationic ion-exchange hydrogel-forming polymer is selected from the group consisting of, poly(vinylamine), poly(allylamine), polyethylenimine; poly(dialkylammoalkyl (meth)acrylamide), of a mixture thereof; and the anionic ion-exchange hydrogel-forming polymer comprises poly(acrylic acid).

Thus it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the method of removing the water as noted in EP 0926162 from the hydrogel poly(allylamine) since the reference 6380456 discloses that poly(allylamines) are infact hydrogels.

#### **Objected Claims**

Claims 2-23,27-31 and 33-36 are objected to for depending upon rejected claims above.

#### **Correspondence**

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Examiner Terressa Boykin, via the receptionist whose telephone number is (703) 308-2351. The examiner can normally be reached on Monday through Friday from 8:00a.m.-5:30 p.m.

tmb



**Examiner Terressa Boykin  
Primary Examiner  
Art Unit 1711**